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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/053,672 | 01/24/2002 | Ryuji Monden | Q68126 | 8430 |

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| EXAMINER | |
|---|---|
| KOPEC, MARK T | |
| **ART UNIT** | **PAPER NUMBER** |
| 1751 | 4 |

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/053,672 | MONDEN ET AL. | |
| | Examiner | Art Unit | |
| | Mark Kopec | 1751 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *42-68* is/are pending in the application.

4a) Of the above claim(s) *42-50 and 55-66* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *51-54, 67-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. *09/576,263* .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

This application is a DIV of S.N. 09/576,263 (filed 5/24/00, now U.S. 6,381,121). Claims 42-68 are currently pending.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 42-44, drawn to a process, classified in class 427, subclass 58+.

II. Claims 45-50 and 55-66, drawn to a conducting paste, classified in class 252, subclass 512.

III. Claims 51-54 and 67-68, drawn to a conducting paste, classified in class 252, subclass 511.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Groups I, II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions, while each directed to various conducting utilities, have different modes of operation and different functions.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of

their recognized divergent subject matter and their different classification, and because the searches required for these distinct groups are not coextensive, restriction for examination purposes as indicated is proper.

During a telephone conversation with Keiko Takagi on 9/15/03 a provisional election was made with traverse to prosecute the invention of Group III, claims 51-54 and 67-68. Affirmation of this election must be made by applicant in replying to this Office action. Claims 42-50 and 55-66 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/576,263, filed on 5/24/00.

The abstract of the disclosure is objected to because it is more than one paragraph. Correction is required. See MPEP § 608.01(b).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 51-54 and 67-68 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "predominantly comprising" in claim 51 is a relative term which renders the claim indefinite. The term is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that

was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 51 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Osaka et al (5,256,463).

Osaka et al (5,256,463) disclose a method for multilayering a CRT surface (Abstract). The multilayering includes phosphor layers and a carbon layer containing organic solvent diluent of organic binder containing carbon dispersed therein (Col 4, lines 39-45). The carbon may use the known carbon such as high purity graphite whose particle is in a range of 0.3 to 10 .mu.m. (Col 4, lines 45-52). Example 2-B discloses 125 parts of high purity graphite powder UFG-5S (manufactured by Showa Denko, Ltd.) were dispersed per 100 parts of acrylic resin (solid) and mixed. The resulting mixture was adjusted at viscosity of 20000 cps (25.degree. C.), resulting in obtaining a carbon paste. The reference example either specifically or inherently meets each of the claimed limitations.

The reference is anticipatory.

Claims 51-54, 67 and 68 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a)

as obvious over WO99/50918 (PCT publication of Iijima et al U.S. 6,447,950).

Note that reference is made to the English language disclosure of U.S. 6,447,950 below.

Iijima et al (6,447,950) disclose electrodes for a battery. The electrodes contain a coating material with binder and carbon (Col 3, lines 35-45). Various binders which have been so far used, such as a crystalline resin, a non-crystalline resin and the like can be used. For example, polyacrylonitrile (PAN), polyethylene terephthalate, polyvinylidene fluoride (PVDF), polyvinyl fluoride, fluororubber and the like are available (Col 3, lines 48-53). The binder is used in an amount of, usually 1 to 40 parts by weight, preferably 1 to 25 parts by weight, especially preferably 1 to 15 parts by weight per 100 parts by weight of the electrode active material. Various solvents include N-methylpyrrolidone (NMP), methyl isobutyl ketone (MIBK), methyl ethyl ketone (MEK), cyclohexanone, toluene, water and the like material (Col 3, lines 53-63). The conductive agent can be added, as required, for the purpose of supplementing an electron conductivity of the electrode active material. The conductive agent is not particularly limited. Examples thereof include graphite, acetylene black, metallic fine particles and the like. The particle diameter of graphite

is determined depending on the thickness of the graphite layer, the mixing amount of the binder and the like. The particle diameter of graphite is preferably 0.1 to 1,000 .mu.m, more preferably 1 to 100 .mu.m. Specific examples of graphite include UFG series manufactured by Showa Denko Co., Ltd (Col 5, lines 22-33). Further, the amount of the binder in the graphite layer is preferably 1 to 60% by weight, more preferably 5 to 40% by weight in the graphite dry coated layer (Col 5, lines 63-67).

The reference is anticipatory.

In the event that the disclosure of WO '918 is insufficient to anticipate the above listed claims, it would have nonetheless been obvious to the skilled artisan to produce a carbon paste comprising rubber-like polymer, solvent and artificial graphite (having the instantly claimed properties) as WO '918 clearly teaches conductive paste compositions containing each of the instantly recited ingredients within their claimed proportions.

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is 703 308-1088. The examiner can normally be reached on Monday - Thursday from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 703 308-4708. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

Mark Kopec
Primary Examiner
Art Unit 1751

MK
October 20, 2003